

USPTO Customer No. 25280

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REMARKS

Claims 21-31 are currently under consideration. All of these claims currently stand rejected. The withdrawal of the rejection made in view of the Golumbie reference is acknowledged with appreciation. Reconsideration and withdrawal of the current pending rejections are earnestly solicited for the following reasons.

Claims 21, 23, and 25-31 are rejected under 35 USC 103(a) as being obvious over Matsumoto et al. (US 5,981,407) in view of Bacon, Jr. (US 2002/0192459). Specifically, the rejection states that Matsumoto teaches a flame retardant fabric comprising a halogen containing polyester fiber, though the rejection acknowledges that the reference fails to teach "the use of a protective film for the fabric." However, the Office Action further states that Bacon "discloses a coating consisting of soft and hard component polyurethanes" that "may be applied to a variety of substrates including clothing", and concludes that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention of Matsumoto et al with the motivation of providing the fabric with a flexible coating that is printable and stain resistant."

Applicant respectfully requests reconsideration for the following reasons. Applicant's claims recite a fabric product comprising a fabric comprising a plurality of yarns into which a flame retardant chemical has been incorporated, with the fabric having applied to it a single layer of a polymer finish, with the finish consisting of a combination of a first urethane polymer having an elongation at break of at least 500% and a second urethane polymer having an elongation at break of less than 500%, wherein the ratio of the first urethane polymer to the second urethane polymer is between about 20:1 and about 5:1 on a solids basis, and wherein the polymer finish imparts a stiff hand to the fabric product, with the hand measuring at least 900 grams in the longitudinal direction and at least 400 grams in the lateral direction when evaluated using ASTM D6828-02. As acknowledged by the Examiner, the Matsumoto reference teaches a flame-retardant fabric that is a blend of three types of fibers: a halogen-containing fiber component, a polyvinyl alcohol fiber component and a polyester fiber component. (Abstract) The fabric is described as being capable of being heat transfer printed, but there is no disclosure or suggestion for putting a coating or finish on the fabric of the variety described in the instant invention.

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The Bacon reference describes "articles having a printed surface as well as flexible coating and film compositions that are printable in combination with exhibiting stain resistance." (Field of the Invention) The Applicant disagrees with the Office Action characterization that the Bacon reference teaches the application of the coating itself to clothing. As seen for example, in paragraph 0052, the substrates are all described as being film-type substrates rather than fabrics, and the mentions of their use in combination with apparel are in the context of applied retro reflectors containing the Bacon coating rather than the teaching of putting the coating on a fabric. Therefore, Bacon fails to disclose or suggest the use of its coating on a fabric, and likewise fails to provide any suggestion that would motivate one of ordinary skill in the art to take the Bacon coating designed for films, and apply them to an uncoated blended fiber FR fabric like that taught in Matsumoto. Furthermore, to do so may even destroy the teachings of both references, since Bacon fails to discuss manufacturing FR materials (and thus might destroy the FR nature of the Matsumoto material, if so added), and the Bacon reference does not teach the use of its coating on a fabric. Therefore, even assuming for purposes of argument that the combining the references would be proper (which it is maintained it is not), the combination fails to achieve the claimed invention.

In addition, Claims 22 and 24 were rejected over Matsumoto and Bacon, as discussed above, in further view of Yilgor. Specifically, the Office Action relies upon Yilgor as teaching that "knitted and nonwoven fabrics are equivalent structures known in the art" and "one of ordinary skill in the art would have found it obvious to substitute woven fabrics for nonwoven or knitted fabrics." The addition of the teachings of the Yilgor reference likewise fail to overcome the deficiencies of the primary rejection as described above. Yilgor is directed to a water vapor-permeable, waterproof two layer coating system having a first breathable polyurethane adhesive and a breathable polyurethaneurea top coat (e.g. Col 5 line 66- Coll. 6, line 2.) Therefore, it likewise fails to disclose or suggest the invention as claimed.

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CONCLUSION

This response is accompanied by a Petition for Extension of Time (two months). In the event that there are additional fees associated with the submission of these papers (including extension of time fees), authorization is hereby provided to withdraw such fees from Deposit Account No. 04-0500.

Respectfully submitted,

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